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The impact of digitalization on management control and performance : A Systematic Literature Review

L'impact de la digitalisation sur le contrôle de gestion et la performance : Une revue de littérature systématique

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Abstract

This article proposes a systematic literature review of 80 research articles investigating the effects of digitalization on management control and company performance. Based on the approach of Tranfield et al. (2003), the analysis is organized according to the framework proposed by Rom and Rohde (2006) which consist of five essential elements: tasks, techniques, organization, behavioral aspects, and performance. The results highlight the significant effect of digitalization on the evolution of management control, by automating repetitive tasks, strengthening decision-making processes using sophisticated analytical tools, and promoting decentralization within organizations. However, these developments raise challenges in terms of adapting to new technologies, resistance to change, and developing employees' skills. The enormous incorporation of digital devices participates in increased transparency and operational efficiency; however, it requires strategic coherence to achieve performance improvements.

Keywords: Digitalisation ; management control ; performance ; Rom and Rohde framework ; systematic literature review.

Résumé

Cette étude propose une revue systématique de la littérature de 80 articles de recherche examinant les effets de la digitalisation sur le contrôle de gestion et la performance des entreprises. Basée sur l'approche de Tranfield et al. (2003), l'analyse est organisée selon les cinq éléments essentiels du cadre proposé par Rom et Rohde (2006) : les tâches, les techniques, l'organisation, les aspects comportementaux et la performance. Les résultats mettent en évidence l'impact significatif de la digitalisation sur l'évolution du contrôle de gestion, en automatisant les tâches répétitives, en renforçant les processus décisionnels à l'aide d'outils analytiques sophistiqués et en favorisant la décentralisation au sein des organisations. Toutefois, ces évolutions soulèvent des défis en termes d'adaptation aux nouvelles technologies, de résistance au changement et de développement des compétences des employés. L'intégration de dispositifs numériques contribue à accroître la transparence et l'efficacité opérationnelle, mais elle nécessite une cohérence stratégique pour améliorer les performances.

Mots clés : Digitalisation ; contrôle de gestion ; performance ; cadre de Rom et Rohde ; revue de littérature systématique.

Introduction

In the era of digitalization and management control (MC), affected by the increasing integration of digital technologies, is undergoing a profound transformation. These developments are redefining the tools and techniques used, modifying the tasks of management controllers, and reorganizing the structures of this strategic function (Fähindrich, 2023), and consequently on the organization's performance (Bredmar, 2017). As a result of these changes, technological solutions, like Enterprise Resource Planning (ERP) systems, Business Intelligence (BI) platforms, and predictive analytics tools, not only automate traditional tasks but also provide access to real-time information and guide decision-making (Cavélius et al., 2018).

Simultaneously, the controllers' behaviors and perception of management are involved in the face of these innovations, requiring continuous adaptation to appropriate new technologies and address the challenges they pose (Al-Htaybat et al., 2017 and 2018). Scholars such as Granlund & Mouritsen (2003), Rom & Rohde (2006), Payne (2021), Arnaboldi et al. (2017), Varaniūtė et al. (2022), and Fähindrich (2023) show that digitalization is a growing research topic in management accounting. Thus, based on the reviewed literature, the interaction between digital technologies and MC has been primarily examined through the tasks and roles of management controllers (Granlund & Malmi, 2002; Guenther, 2013) and MC techniques and tools (Rom & Rohde, 2006; Guenther, 2013).

The ultimate goal of this discussion is to answer the following question: **What is the impact of digitalization on management control and company performance?**

As a way to answer this question, we guided this research by adopting the systematic literature review (SLR) method, following the approach of Tranfield et al. (2003). This review is based on previous research that investigates the connection among digitalization and management control (MC), as well as its impact on organizational performance. For this purpose, we will first examine the conceptualization of MC and digitalization, followed by a theoretical framework of our literature search, mainly the framework of Rom and Rhode (2006). Next, we will describe the methodology used to select the 80 articles included in our review. Finally, we will analyze the literature and present our conclusions.

1. Conceptualization of management control and digitalization:

1.1. Management control definition

Anthony (1965) defines MC as the process by which managers ensure that resources are used efficiently and effectively to achieve organizational objectives. However, his vision has been criticized for its narrow focus on financial aspects, excluding strategic and operational control

(Mintzberg, 1979; Otley, 1994). During the 1970s and 1980s, and in response to these criticisms, there was a growing emphasis on the need to measure and optimize overall company performance. This context was marked by the emergence of conceptual frameworks aimed at structuring approaches to organizational control. Indeed, various authors, such as Langfield-Smith (1997), Merchant (1998), and Malmi & Brown (2008), have emphasized the integrated nature of MC systems, consisting of complementary tools. Flamholtz et al. (1985) adopt a behavioral approach favoring cooperation, while Ouchi and Johnson (1978) proposes a typology of control based on transaction costs (as cited by Guenther, 2013). Simons (1991) emphasizes that control systems are formal devices that reconcile innovation and goal attainment. Moreover, Bouquin (1994) highlights the coherence between strategy and daily actions, making MC an essential link between strategic and operational levels. Affes (2017) and Strauß & Zecher (2013) define these systems as tools supporting managers in planning, performance evaluation, and making informed decisions to correct deviations and adapt to changes.

1.2. Definition of digitalization and related concepts

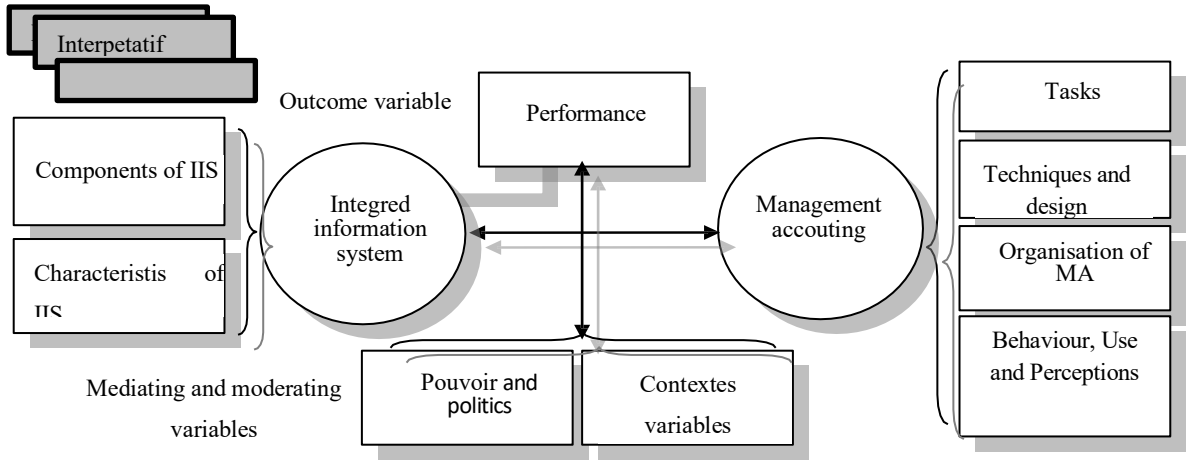
Digitalization, distinct from digitization and digital transformation (DT), is at the heart of academic debates. Digitization refers to the technical conversion of analog information into digital data, a fundamental but limited process (Hylving & Schultze, 2013; Fähindrich, 2023). Brennen & Kreiss (2016) define digitization as the act of transforming analog information streams into digital bits, and digitalization as the restructuring of social life around digital infrastructures. Digitalization is, therefore, an intermediate step towards DT. It optimizes specific processes without necessarily involving major strategic changes (Knudsen et al., 2020). It is associated with significant socio-technical changes (Thorseng & Grisot, 2017). Koll & Nneme (2023) point out that researchers have often struggled to agree on definitions, highlighting the multifaceted nature of the concepts.

The DT, on the other hand, goes beyond digitalization by integrating digital technologies into all organizational aspects. It redefines business models, processes, and interactions with stakeholders, requiring a comprehensive strategic overhaul (Gobble, 2018). It leverages data and disruptive technologies (AI, Cloud, IoT) to generate major innovations (Hess et al., 2016). The DT uses data from digitalization for strategic decisions and market-aligned offerings (Verhoef et al., 2021). In summary, digitalization lays the technical foundation necessary for DT, which requires strategic reinvention to adapt businesses to the digital age. Digital MC denotes to the use of digital technologies in MC functions.

2. Theoretical framework of the research

The analytical framework of Rom & Rohde (2006) is a structured framework that maps the relationships between integrated information systems (IIS), particularly ERP software, and management accounting. It evaluates their impact on accounting practices by integrating various contextual factors and including systems such as prospective dashboards and budgeting software. The framework distinguishes itself from earlier models through its flexibility and independence from research paradigms (Knudsen, 2020). The IIS are described according to their components (ERP, dashboards, etc.) and their characteristics (integration, complexity, user-friendliness). Booth et al. (2000) classify three types of integration: data, hardware/software, and information. Information integration is considered essential in management accounting (Knudsen, 2020). Granlund & Malmi (2002) and Davenport (1998) show that while ERPs impact management accounting through their rigidity, they are also influenced by accounting needs in a bidirectional cycle Employee competencies and internal political dynamics also play a decisive role. Additionally, IIS support analytical tasks through BI systems, while management accounting structures and aligns organizational practices (Rom & Rohde, 2006). The work of Rom & Rohde (2006) highlights that organizational performance depends on this interaction between IIS and management accounting. The components and characteristics of IIS influence management accounting, while this connection is moderated or mediated by the contextual factors such as power, internal politics, and organizational or environmental structures. Management accounting is analyzed through several dimensions: tasks, techniques and design, organization, and user behavior. These dimensions show that IIS profoundly influence organizational practices and performance. The following figure represents the model of Rom & Rhode (2006).

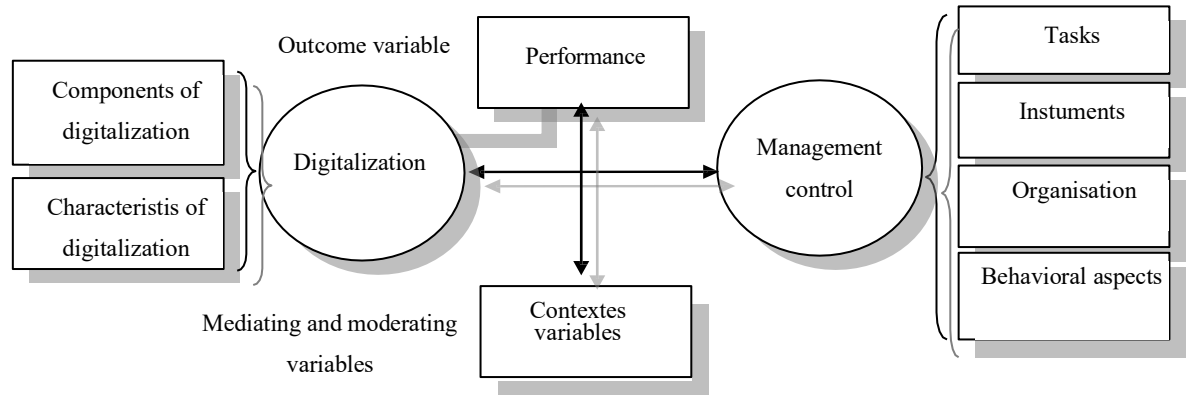
Figure N°1 : Management accounting and integrated systems research



Source: Rom & Rohde (2006)

Rom & Rohde's (2006) framework provides a useful lens for examining the effect of digitalization on MC, considering shifts in MC practices and management controllers' role (Knudsen, 2020). Drawing on Knudsen's (2020) components, our model assesses how digitalization reshapes MC by analyzing technological advancements and their influence on contemporary practices. The following figure illustrates our research model, adapted from Rom & Rohde (2006).

Figure N°2 *:* **Research model**



Source : Adapted framework of Rom & Rohde (2006)

3. Research methodology

To grasp the interaction between the phenomenon of digitalization and the components of MC as a strategic function within the company, we adopted a SLR to manage variety of information across several study domains by analyzing and mapping current findings to identify gaps and offer orientations for future research, as outlined by Tranfield et al. (2003). A SLR employs a defined methodology and a multi-stage review approach to gather and critically evaluate a set of research articles (Kammoun & Saad, 2020). As proposed by Tranfield et al. (2003), a three-

step process was employed to ensure reproducible and transparent outcomes. The figure 3 delineates the three-step approach along with its several sub-processes. This technique and the methodical presentation of the discovered literature aim to minimize subjectivity (Tranfield et al., 2003; Murphy, 2012; Baker, 2016; Fähindrich, 2023). The SLR approach suggested by Tranfield et al. (2003) offers a comprehensive framework for conducting rigorous reviews of existing research. It is structured into three main stages, each comprising specific phases to ensure methodological precision and practical relevance.

The first stage « Planning the Review » lays the groundwork for a focused and systematic process. It begins with identifying the need for a review, where gaps in existing literature are highlighted, the relevance of the review topic is defined, and its potential contributions are emphasized. In preparation of a proposal for a review, a detailed proposal is developed, outlining the objectives, scope, key research questions, resources, timeline, and methodology. This is followed by the development of a review protocol, which serves as a roadmap, specifying criteria for inclusion and exclusion, the search strategy, databases to be used, and methods for data extraction and analysis to ensure consistency and transparency.

The second stage « Conducting the review », concentrates on determining, assessing, and synthesizing relevant research studies. It starts with the identification of research, involving a thorough search across databases, journals, and grey literature using predefined keywords and strategies to locate relevant studies. Flowed by the selection of studies, these studies are screened based on the inclusion and exclusion criteria to ensure only high-quality and pertinent research is included. Then the phase of the study quality assessment evaluates the methodological rigor of the selected studies, considering factors like the study design, sample size, and analysis processes. During the phase of data extraction and monitoring progress, key data is systematically extracted using standardized templates, and progress is monitored to align with the review protocol. Finally, in data synthesis phase, the extracted data is integrated using qualitative or quantitative methods to identify patterns, relationships, and overarching themes.

The third stage, « Reporting and dissemination », emphasizes the communication and application of findings. In the first phase, the report and recommendations, a detailed report is prepared, presenting the results of the review along with actionable recommendations for practice, policy, and future research. Lastly, the last phase, named « Getting evidence into practice » involves implementing strategies to disseminate findings effectively and translate them into practical applications, such as through stakeholder collaboration, guideline creation, or integration into existing systems.

As for our research, by following the approach explained above, we first identified the need for this literature review, initiated primarily by the need for a synthesis of existing work analyzing the interactions between digitalization and MC, as well as by the need to identify knowledge gaps on this subject. This guided us towards the development of different research questions that frame our study. The content of the research was precisely defined using the Rom & Rohde (2006) framework. As a result, five research groups were identified and integrated into the literature search, such as MC tasks, MC instruments, MC organization, behavioral aspects of MC, and performance. Our review is based on a search in the following online databases: Google Scholar, Science Direct, Researchgate, Springer Nature, Elsevier, and Taylor Francis Online. In order to cover a broad range of literature, numerous terminologies for MC as well as for digitalization were incorporated into the search string as shown in the table N°1. Subsequently, we established both the inclusion and exclusion criteria for the studies, as determined by the databases explored as described in the table 2.

After subtracting the databases using the terms, search strings, and inclusion and exclusion criteria defined above, **523** articles were obtained. This step was followed by an examination of the articles' titles and abstracts to filter through those that were part of our research context to guarantee their eligibility, thus, **80** articles were identified and examined as part of this literature review. The figure N°4 presents an overview of the articles according to their publication years. The following figure gives an overview of the articles according to their year of publication. For more details on these articles, see Table N°3 in the Annex N°1.

Table N°1 : Keywords

Keywords in english	Keywords in french
("management control" OR "management accounting") AND ("digitalization" OR "digitization" OR "enterprise resource planing" OR "ERP" OR "integrated information system" OR "ERP" OR "internet of things" OR "Iot" OR "Business intelligence" OR "BI" OR "cloud computing" OR "blockchain" OR "big data" OR "artificiel intelligence" or "AI" OR "e-learning" OR "automatisation" OR "robotic" OR "digital marketing")	("contrôle de gestion" OU "comptabilité de gestion") ET ("digitalisation" OU "numérisation" OU "progiciel de gestion intégré" OU "PGI" OU "Système d'information intégrés" OU "internet des objets" OU "informatique décisionnelle" OU "intelligence économique" OU "informatique en nuage" OU "masse de données" OU "intelligence artificielle" OU "apprentissage automatique" OU "automatisation" OU "robotique" OU "marketing digital")

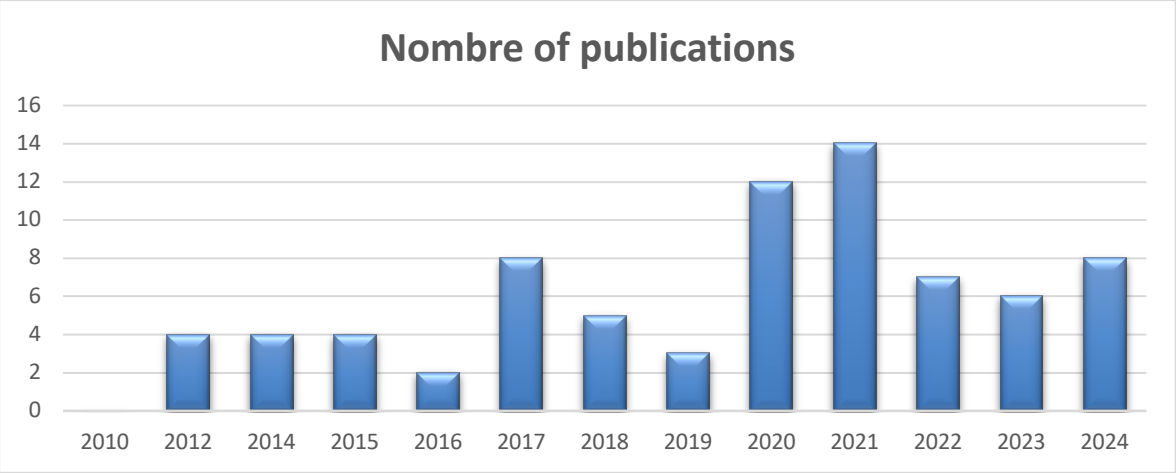
Source : Autors

Table N°2 : Inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria
Publication year: From 2010 to October 2024	**Publication year**: Before 2010 and after October 2024
Subject area: Business, Management and Accounting	**Subject area**: Subjects other than Business, Management and Accounting »
Document type: Journal article and conference paper	**Document type** : Documents other than journal article and conference paper
Language: French and English	**Language**: Languages other than French and English

Source : Autors

Figure N°4: Number of publications per year, 2010–2024



Source : Autors

4. Data description and analysis

Here, our primary focus is on analyzing the multifaceted impact of digitalization on several key dimensions of MC. That is to say, investigating the impact that digitalization has on MC instruments, tasks, organizational structures, and the behavioral aspects of MC as reflected in the 80 studies included for this analysis. Moreover, this part is divided into two sub-sections; the first provides a definiton of each term, followed by the analysis of 80 studies under investigated.

4.1. The impact of digitalization on MC instruments

According to the literature, digitalization is a growing research topic in MC, influencing associated techniques and tools. Authors such as Payne (2021), Arnaboldi et al. (2017), Varaniūtė et al. (2022), Corsi et al. (2017), and Fahindrich (2022) emphasize this evolution, demonstrate how digital technologies are reshaping MC practices. These technologies affect both the tools and the methodes utilized for data analysis and decision-making, decision-making, and performance measurement in MC. In particular, works such as Vakalfotis et al. (2011), Guenther (2013), Bhimani & Willcocks (2014), Lazarevna et al. (2020) and Knudsen (2020) explore the impact of digital instruments on MC practices and demonstrate how innovations like artificial intelligence (AI), Big Data (BD), and ERP systems are changing the landscape of MC.

Fähndrich (2023) mentioned that in German-speaking countries, the MC framework was subjected to digital innovation where new technologies significantly promoted the top-management decision-making instrument. On the same way, Alsughayer (2024) insist on the complexity of integrating ERP systems, which have transformed MC practices by facilitating

the collection, analysis, and use of data, while optimizing decision-making and resources. However, they also note challenges, such as the difficulty in modifying these systems once implemented. On the other hand, Knudsen (2020) proposes a complementary perspective, asserting that lighter digital technologies are more flexible and adaptable after their implementation. The integration of digital tools into MC has led to greater standardization and automation, especially in administrative functions. Fähndrich (2024) highlights the efficiency gains provided by digitalization, which streamlines processes, reduces manual efforts, and refocuses management accounting tools on value-creating activities, ultimately improving organizational effectiveness. Broccardo et al. (2024) also support this claim, noting that digitalization allows for more agile decision-making through enhancing the pace and precision of data processing.

In terms of operational practices, digitalization and the widespread adoption of information systems like ERPs have profoundly impacted management accounting. Traditionally, information systems were isolated by function, but now ERPs have enabled the integration of management practices and systems. As Knudsen (2020) points out, this has allowed for more interconnected and streamlined processes across departments, enhancing the overall efficiency of MC systems. Additionally, technologies such as BI systems, which include features such as statistical analysis and interactive visualizations, have become central tools in MC, providing valuable insights to support decision-making (Wieder et al., 2012). These systems also facilitate the structuring and exploitation of data, which improve decision-making capabilities (Gullkvist, 2013).

The combination of ERPs and BI systems, as noted by Tang et al. (2017) and Knudsen (2020), enables professionals to anticipate market reactions or forecast financial demands before the publication of results. Moreover, BI systems enhance budgeting practices by improving the management of huge volume of data, rising the efficiency, pace, and accuracy of budgeting processes (Al-Zubi et al., 2014). This, in turn, result in more informed decisions and the optimization of resource allocation. Medved et al. (2023) and ACHHAIBA & OMARI ALAOUI (2022) confirm that the integration of workflows and predictive analysis strengthens budgeting practices, allowing organizations to make better strategic decisions.

In addition, predictive analysis and BD are transforming traditional management accounting practices by enabling more agile and collaborative decision-making (Nespeca & Chiucchi, 2018; Sardini, 2021). These innovations help redefine internal processes and managerial environments by providing more real-time insights, which enhances responsiveness to dynamic

market conditions. Despite these advancements, some limitations remain. For instance, Granlund (2011) points out that technological obsolescence can limit the effectiveness of digital tools, and there are instances where accounting perspectives remain narrow. Similarly, Varaniūtė et al. (2022) stress the need to combine environmental and social dimensions into management accounting practices in response to the growing focus on sustainability and circularity.

The combination of digital technologies like BD into MC tools, as claimed by Medved et al. (2023) and Arnaboldi et al. (2017), has particularly improved control systems, especially in cost control, and has enabled more optimized visualizations for better decision-making. Furthermore, Al-Zubi et al. (2014) emphasize that BI systems improve budgeting efficiency by managing large data volumes, enhancing decision-making speed and accuracy. These advances in BI systems have also been found to strengthen the decision-making process in industrial maintenance management (Al-Zubi et al., 2014). However, as highlighted by Möller et al. (2020), the transition to advanced digital tools remains uneven, with many organizations still relying heavily on traditional systems like Excel. This limited adoption restrains the full potential of digital tools. As Henttu-Aho (2016) explains, new methods such as predictive budgeting are pushing controllers into more strategic roles, enabling them to collaborate more closely with other departments and contribute more directly to organizational strategies. This transformation is critical in dynamic environments that demand increased adaptability.

Finally, while digital tools like BI systems and the Balanced Scorecard (BSC) have enhanced reporting by providing more structured, interactive visualizations, there remains resistance to fully adopting these technologies. Some companies continue to use traditional methods like spreadsheets, delaying the revision of their processes (Spraakman et al., 2021). This underlines the importance of overcoming such resistance to fully leverage the potential of digital tools in MC. In addition, while digitalization has brought about significant improvements in MC, such as enhanced decision-making, automation, and efficiency, it also presents challenges related to system integration, data interpretation, and adoption rates. As organizations continue to adopt and integrate these digital tools, they must carefully navigate these complexities to gain the maximum benefits of DT in MC.

4.2. The impact of digitalization on MC Tasks

The increase of digitalization has significantly reshaped the scope and the nature of tasks associated with MC. It accelerates the efficiency of MC tasks by automating processes, which reduces errors and the amount of work for accountants (Hasibuan et al., 2022). It also enhances

the pace and quality of decision-making, particularly in budget management, where automation and predictive analytics boost the accuracy of forecasts (Elhamma & El-Moumane, 2023). As Broccardo et al. (2024) claim, it provides real-time data, leading to more informed decision-making processes and improving transparency and visibility within companies. In conformity with this, Al-Htaybat and von Alberti-Alhtaybat (2017) demonstrate how BD offers thorough, real-time insights that challenge traditional reporting patterns and allow for more flexible decision-making. Digital tools are thus redefining the scope and timing of MC tasks, making them more proactive and responsive.

Moreover, the introduction of data mining techniques, as advanced computational methods, has significantly changed the role of MC. Bergmann (2012) highlights how digital solutions, such as quality control systems and predictive maintenance algorithms, empower managers to make better judgments based on real-time data, rather than solely relying on historical trends and human intuition. This shift is further supported by Andreassen (2020), who states that the duties of management accountants have developed in response to digitalization, particularly with automation and AI. These technological advancements free up accountants from repetitive tasks like data collection and budgeting, allowing them to focus on more strategic activities such as scenario analysis. Arnaboldi et al. (2021) also emphasize that real-time decision-making is facilitated by the increasing use of algorithms and data analytics, enabling MC activities to be handled more efficiently and accurately.

In sectors such as manufacturing and supply chains, Awan et al. (2022) stress that digitalization not only automates routine MC tasks but also enhances predictive capabilities, improving maintenance schedules and operational efficiency. Furthermore, these technologies stimulate creativity by providing insights that generate new ideas and solutions to adapt to changing market conditions, enhancing future-proofing and agility in MC. Similarly, Troshani and Rowbottom (2021) note the transformation of reporting through digital dashboards and interactive systems, shifting from manual reporting to real-time performance monitoring. The widespread use of digital tools, like BI systems, has allowed for more agile and collaborative decision-making, transforming the role of management controllers to pivotal contributors in strategic decision-making (Sardini, 2021; Szukits, 2022).

However, digitalization presents challenges, particularly with the integration of new tools and processes. While it simplifies workflows, some organizations face resistance to adopting these innovations, as seen in the continued use of traditional methods such as Excel (Granlund & Malmi, 2002; Spraakman et al., 2021). The adoption of cloud-based ERP systems improves

data quality and transparency but can also limit the autonomy of local accountants (Carlsson-Wall et al., 2021). Despite these challenges, digitalization offers opportunities for automation and process simplification, leading to increased productivity and quick access to information (Ciampi, 2021).

As digitalization continues to evolve, the responsibilities of management controllers are expanding. Fähndrich (2024) argues that their roles are no longer confined to traditional accounting functions but now include the design and maintenance of MC systems and the effective sharing of information with stakeholders. Isaksson et al. (2018) assert that optimization of control and operations will evolve, bringing both opportunities and challenges for MC tasks, which requires controllers to sharpen their analytical skills (Medved et al., 2023; Wunderlich & Wömpener, 2024). Moreover, digitalization requires management controllers to develop new competencies, particularly in data analysis and digital systems, to navigate this transformed landscape (Quattrone, 2016).

The literature suggests that digitalization is fostering a shift from technical experts to strategic business partners. Lamssarbi et Bouaziz (2022) argue that digital tools like BD and BI are key enablers of this transformation, allowing management controllers to concentrate more on data analysis and strategic decision-making rather than routine tasks. The expansion of their roles includes responsibilities for managing and interpreting large volumes of data, which not only strengthens their strategic involvement but also necessitates continuous development of advanced analytical skills. These skills are crucial for management controllers to leverage the immense amounts of data accessible and to influence decision-making processes effectively (Nespeca et Chiucchi, 2018; Spraakman et al., 2021).

Additionally, while digitalization enhances the quality of decision-making, it also necessitates effective data management practices. As Cavelius et al. (2018) warn, if management controllers do not actively engage in managing the increasing volumes of data, they risk becoming obsolete in less digitalized companies. The integration of digital tools does not automatically transform their role into that of a business partner; it requires rigorous management of data reliability and transparency (Reutter et al., 2021). Therefore, the management controllers' role in data analysis, forecasting, and decision-making is crucial for ensuring the beneficial implementation of digital technologies and the creation of value within organizations.

In conclusion, the digitalization of MC has created significant shifts in the role of management controllers, transforming them into strategic partners who manage data flows, analyze insights, and provide key decision-making support. While the integration of new technologies like AI,

BI, and ERP systems offers vast opportunities for more efficient and informed decision-making, it also requires controllers to continuously develop new skills and navigate the challenges of data management, system integration, and organizational resistance to change. As controllers embrace their new roles, they become essential drivers of strategic decision-making, agility, and future-proofing within modern organizations.

4.3. The impact of digitalization on MC organization

The continuous improvements in digital technologies have significantly impacted not only MC tasks and instruments but also the overall organizational structure and governance. As digitalization accelerates, MC organizations are shifting from intuition-based decision-making to data-driven approaches (McAfee et al., 2012). This transformation enables organizations to take more informed decisions based on empirical evidence rather than solely relying on experience or intuition. Digitalization allows MC organizations to collect and retain vast amounts of real-time data, enhancing decision-making and operational efficiency (Bergmann, 2012), while reinforcing transparency and visibility within organizations (Broccardo et al., 2024). Furthermore, by transitioning from periodic reporting to continuous monitoring, organizations can improve operational efficiency and react more swiftly to changes in the business environment (Daskalova & Ivanova, 2019).

Moreover, as Arnaboldi et al. (2022) argue, organizations are increasingly relying on algorithms to guide decision-making, which reduces the power of traditional management roles. This growing reliance on digital technologies for MC has contributed to changes in organizational culture, particularly in managerial hierarchies. The urge of real-time data and agile decision-making has pushed organizations toward flatter structures and more collaborative approaches, enabling faster and better decision-making (Bedford Malmi, 2016). Additionally, digitalization fosters decentralization, providing broader access to relevant information, which enhances both the strategic and operational agility of companies (Syed, 2023). This evolution necessitates that management accountants develop new analytical and technological skills to navigate the BD environment and drive data-informed decision-making processes.

Fried (2017) further illustrates that MC plays a strategic role in fostering innovation, promoting flexibility, and balancing change with stability. Corsi et al. (2017) highlight the importance of adopting an integrated and evolutionary approach to MC systems, which includes investing in digital technologies, employee training, and the continuous improvement of digital platforms. As digital technologies evolve, so must the skill set and strategic positioning of management

controllers, empowering them to improve the efficiency, accuracy, and relevance of organizational processes.

The integration of digital tools such as ERPs has significantly transformed the organization of the MC function. By improving data structuring and process fluidity, ERPs facilitate budget preparation and decision-making (Byrne & Bernard Pierce, 2007; Pervan & Dropulić, 2019). However, customization of these systems is essential to align with specific organizational needs and environments. Furthermore, the introduction of blockchain and smart contracts, as discussed by Kutsyk et al. (2020), is reshaping traditional MC. These technologies foster employee trust and autonomy, enabling Decentralized Autonomous Organizations (DAOs) that offer a more transparent and democratic model, automating processes and reducing costs.

Digitalization, combined with BD and advanced control systems, performs a crucial role in optimizing value creation processes and permits the emergence of disruptive new business models (Vitale et al., 2020). Syed (2023) highlights the numerous advantages of digitalization, including improved decision-making, increased efficiency, decentralization, and better resource allocation, all of which transform MC processes. However, these changes also bring forth challenges such as resistance from financial report preparers and users of financial information, as noted by Troshani & Rowbottom (2021), potentially slowing the integration of digital tools and affecting organizational efficiency and adaptability.

Organizational changes driven by digitalization, such as the decentralization of decision-making and increased inter-departmental collaboration, are also critical to MC's evolution. Fähndrich (2023) emphasizes that organizational culture plays a vital role in the success of digitalization. Platov et al. (2021) argue that organizations must undergo a cultural transformation to adapt to digital changes, which involves adopting new management systems and business models. Szukits (2022) and Liew (2015) further stress that an organization's technological orientation is crucial for enabling informed decision-making and influencing individual behaviors and overall organizational dynamics.

Digital technologies, particularly BD, cloud computing, and social media, are reshaping MC. These technologies not only alter costs and organizational strategies but also strengthen MC as a pivotal tool for integrating and optimizing decision-making processes. By processing massive volumes of data, they foster innovation and improve management, but also present challenges related to outsourcing and data security. Papiorek and Hiebl (2023) emphasize the role of quality information systems in automating processes and enhancing the efficiency of MC. This

transformation positions MC as a strategic crossroads between technological innovation and organizational needs, stabilizing operations in an increasingly complex economic environment. In addition, the automation of processes has revolutionized MC by reducing human errors and freeing up time for higher value-added activities. Syed (2023) notes that automation streamlines budget preparation, performance measurement, and reporting, enabling resources to be redirected toward innovation and strategic initiatives. Hilmi and Kaizar (2023) support this view, showing that automation benefits tasks like the collection and consolidation of data, performance variance analysis, and dashboard creation, enabling real-time data acquisition and facilitating quicker, more informed decision-making.

Möller et al. (2020) describe a DT process that includes five interdependent pillars: data collection, integration, analysis, reporting, and exception management. Data collection automates information acquisition from various sources, reducing errors and accelerating access to the necessary data for decision-making. Data integration merges these sources into a coherent system, facilitating their use in centralized platforms like ERPs or analytical tools. AI-driven analysis generates forecasts, making decision-making more proactive. Automation of reports reduces manual workloads, providing real-time information, while exception management enables quick identification and resolution of anomalies.

This digitalization and automation enhance efficiency, streamline operations, and boost productivity (Syed, 2023). By reducing human errors, optimizing costs, and improving competitiveness, they enable companies to respond more rapidly to fluctuating demands. Moreover, automation stimulates innovation by permitting human resources to concentrate on creative and strategic tasks. It produces actionable data that optimize organizational strategies and contribute to environmental sustainability, while creating new professions related to the management of automated systems (Syed, 2023).

The MC plays a pivotal role in governance by providing accurate and relevant information for evaluating performance and guiding strategic decisions. As Chenhall and Moers (2015) argue, it fosters more collaborative governance by facilitating communication between stakeholders and ensuring transparency. It also ensures the compliance and accountability of managers, while identifying performance gaps and facilitating necessary adjustments (Merchant & Van der Stede, 2017). Furthermore, risk management is strengthened by tools like dashboards and predictive analysis, which help anticipate potential impacts (Collier, 2005).

In conclusion, digitalization is revolutionizing MC, enabling companies to make more agile and informed decisions through real-time data processing and automation. This transformation

enhances responsiveness, competitiveness, and collaboration, all of which are fundamental in today's fast-paced business environment (Syed, 2023; Westerman et al., 2014; El Kezazy & Nafzaoui, 2023). Management controllers, now empowered by advanced digital tools, are central to driving this transformation, assuming strategic roles that extend beyond traditional functions and contribute significantly to innovation and organizational success.

4.4. The impact of digitalisation on the behavioral aspects of MC

The impact of digitalization on the behavioral aspects of MC has been put under the spotlight by various authors over the decades, each highlight different implications for organizational behavior and decision-making. The common theme across many articles is the way digitalization fosters increased data-driven decision-making, reshaping how management accountants, controllers, and employees interact with information and each other. For instance, Al-Htaybat and von Alberti-Alhtaybat (2017) emphasize that digital tools, like BD analytics, can shift organizational communication dynamics by focusing more on numerical data rather than qualitative insights. This could potentially reduce the depth of collaborative discussions among stakeholders, as the emphasis moves toward data outputs rather than the human elements of problem-solving.

However, they also point out that digitalization necessitates a rise in data literacy among accountants and managers, promoting a more collaborative environment where insights are shared across departments. Similarly, Guenther (2013) discusses how digitalization enhances the guidance of employee behavior, offering more real-time data and analytics, which could improve decision-making processes and ensure employees' actions align more closely with organizational goals.

On the other hand, Andreassen (2020) explores how digital technology alters behavioral expectations for divisional management accountants. The shift towards digitalization reduces their involvement in discussions about customer and pricing strategies, highlighting how digital tools can reshape roles within an organization. Meanwhile, Bergmann (2012) sees the behavioral aspect of MC being transformed by the introduction of digital systems, suggesting that digitalization fosters a more team-oriented environment, enhancing collaboration and communication between domain experts and data specialists. This leads to a more integrated approach to decision-making across the organization. Arnaboldi and Lema (2021) argue that digitalization encourages openness and democratic interaction in museum communication, a more specialized example of how digitalization shifts the power dynamics traditionally seen in MC systems. The democratization of decision-making, as discussed in Broccardo et al. (2024),

highlights how digital tools decentralize decision-making, enabling employees at different organizational levels to act more autonomously, fostering a more collaborative work environment. This shift is closely related to McAfee et al. (2012), who suggest that digital tools reduce traditional hierarchical barriers, leading to a more inclusive culture where contributions from all employees are valued.

In addition, Arnaboldi et al. (2022) emphasize the importance of human interaction with technology, stressing that while algorithms and AI can support decision-making, they cannot replace human judgment, which remains central to organizational processes. This aligns with Liu et al. (2022), who emphasizes the critical role of human involvement in the operation of digital systems, ensuring that technology complements human expertise rather than replacing it.At the same time, digitalization's impact on behavioral control is noted by Fähndrich (2024), who suggests that organizations are increasingly using digital tools to manage employee behavior to align actions with organizational goals.

However, Möller et al. (2020) caution that while digital tools can mitigate certain behavioral biases in decision-making, they also introduce new biases, which need to be carefully managed. This duality of digitalization's influence on human behavior is further complicated by ethical concerns, as Troshani and Rowbottom (2021) highlight how digital reporting can influence ethical decision-making, such as earnings management. Their work suggests that digitalization not only reshapes operational decisions but also impacts organizational ethics, requiring new forms of oversight and accountability.

In addition, the adaptation to new technologies is a crucial aspect of DT. Isaksson et al. (2018) and Hasibuan et al. (2022) emphasize the need for employees to adapt, noting that this adaptation - whether in terms of skills development or behavioral change - can either foster acceptance or resistance, rely on the organization's culture and approach to change management. Therefore, the transformation of organizational behaviors extends beyond just data and decision-making. The adaptation to change, as discussed by Henttu-Aho (2016), is a critical aspect, as controllers must shift their mindsets to embrace new technologies and workflows. This transformation can lead to increased collaboration between managers and controllers, allowing for more informed and proactive decision-making. Stress, however, can arise during this transition, as employees adapt to the demands of new digital tools (Henttu-Aho, 2016). Similarly, Isaksson et al. (2018) emphasize the need for employees to adjust to new technologies, with the culture of the organization influencing whether this change is accepted or resisted. Hasibuan et al. (2022) similarly note that a culture of creativity and

adaptability is essential for successful DT, which involves not just technological but also behavioral changes across the organization.

The role of management controllers has also evolved in response to digitalization. Rumyantseva et al. (2020) note that digital tools have not only enhanced decision-making but have also empowered employees, providing them with access to real-time data that improves their accountability and decision-making. This empowerment, as mentioned by Syed (2023), promotes a culture of continuous improvement and strategic alignment, as employees are increasingly encouraged to identify inefficiencies and innovate within their roles. Furthermore, the focus on collaboration and communication within organizations, as noted by both Rumyantseva et al. (2020) and Elhamma & El-Moumane (2023), reflects how digital tools facilitate more integrated and efficient teamwork, ultimately leading to better organizational cohesion and performance. In conclusion, the authors collectively present a nuanced picture of digitalization's impact on MC. While digital tools promote greater collaboration, data-driven decision-making, and empowerment of employees, they also introduce challenges such as resistance to change, reliance on quantitative data, and ethical concerns. The successful integration of digital technologies into MC practices requires organizations to balance these behavioral shifts with the need for transparency, accountability, and continuous learning. As organizations adapt to digital tools, fostering a culture of creativity, adaptability, and ethical consideration will be crucial to managing the behavioral implications of these technological advancements.

4.5. Impact of digitalization on the company's performance

Digitalization has become a transformative force within modern organizations, significantly impacting various aspects of company performance. The integration of digital tools such BI systems, ERP systems, and automation technologies has revolutionized how companies approach MC, decision-making, and overall operational efficiency. The shift from traditional methods to data-driven practices is not only optimizing internal processes but also enhancing organizational responsiveness, innovation, and competitiveness in a fast-evolving business environment. One of the most noteworthy impacts of digitalization on company performance is its ability to improve decision-making by means of the use of real-time data. The integration of BI systems with ERP solutions enables companies to collect, analyze, and present huge amounts of data from various sources, including customer interactions, internal operations, and market trends. These systems allow decision-makers to access up-to-date information, which is critical for making informed strategic decisions (Syed, 2023). Tools like interactive dashboards,

automated forecasting, and data analytics not only streamline decision-making but also improve the accuracy and timeliness of responses to market changes (El Kezazy & Nafzaoui, 2023). By shifting from manual reporting to real-time performance tracking, organizations can quickly determine areas of improvement, optimize processes, and seize new opportunities.

Furthermore, the automation of data collection and reporting processes decreases human error and frees up time for more strategic tasks, enhancing operational efficiency (Dony & Maurel, 2022). This automation allows businesses to move away from outdated, static data, permitting managers to make decisions based on current, relevant information (Voyer, 2011). With this increased focus on real-time data, companies can better align their strategies with dynamic market conditions and improve overall outcomes. The digitalization of MC systems has also led to significant improvements in organizational efficiency. BI systems, when integrated with ERP platforms, improve the flow and accessibility of information, which streamlines processes such as budget preparation, resource allocation, and performance evaluation (Youssef & Mahama, 2021). The seamless exchange of data between different departments fosters greater collaboration and ensures that all stakeholders are working with the same information. This transparency allows for better communication and coordination within the organization, ultimately improving decision-making and reducing inefficiencies (Keimer & Egle, 2020).

Moreover, digital tools like automated forecasting and predictive analytics not only provide valuable insights into current performance but also help organizations anticipate future challenges and opportunities. By exploiting BD and AI, companies can optimize their resource allocation and financial performance, ensuring that they remain competitive and adaptable to market shifts (Daskalova & Ivanova, 2019). The real-time capabilities of these tools ensure that businesses are more agile, enabling them to respond quickly to external factors, such as changes in customer preferences or fluctuations in market demand. The integration of digital technologies into company operations also encourages innovation and strategic agility. Digital platforms, including BI and ERP systems, enable companies to track performance indicators across multiple dimensions, providing a comprehensive view of their operations. This holistic approach to performance monitoring allows organizations to identify areas where innovation is needed and prioritize investments in new technologies or strategies (Bredmar, 2017).

Additionally, digitalization facilitates more agile strategic decision-making. As D'Cruz et al. (2016) point out, organizations can adapt traditional strategies to the demands of the digital world by embracing a culture of experimentation and flexibility. The use of real-time data not only enhances the accuracy of decision-making but also empowers businesses to make quicker

strategic adjustments, ensuring they stay ahead of competitors in a rapidly changing environment. For instance, interactive dashboards and data analysis tools allow for immediate adjustments to marketing strategies or operational processes, which can significantly impact a company's competitive positioning.

Another significant benefit of digitalization is its impact on performance evaluation and organizational transparency. By integrating digital tools such as BI systems into performance management processes, companies can enhance their capability to monitor key performance indicators (KPIs) in real-time (Syed, 2023). This ongoing evaluation process enables businesses to assess their operational efficiency and strategic effectiveness continuously. Real-time data allows organizations to identify performance gaps early on and make the necessary adjustments to stay on track.

Moreover, the transparency facilitated by digital tools promotes greater accountability within the organization. As Lazarevna et al. (2020) highlight, digital tools foster a culture of openness, where leaders and employees can access the same data and collaborate on decision-making. This increased visibility not only helps improve communication within teams but also strengthens governance and corporate accountability. Digitalization thus plays a crucial role in aligning the interests of various stakeholders, from senior management to frontline employees, with the overall strategic goals of the organization. In addition, digitalization provides companies with a competitive advantage by optimizing their performance management systems and facilitating better strategic planning. The capability to collect and analyze vast quantities of data allows companies to refine their business strategies, optimize their operations, and better serve their customers (Gigova et al., 2019). As organizations increasingly rely on data-driven practices, they gain the flexibility to adapt to changing market conditions and make informed decisions that enhance their market positioning.

The competitive advantage offered by digitalization extends beyond internal operations. The integration of digital tools also helps companies interact more effectively with external stakeholders, including customers, suppliers, and partners. For instance, the use of digital platforms enables real-time communication and collaboration, improving customer service, product development, and supplier relationships. By improving these external interactions, companies can enhance their overall value proposition and gain a competitive edge in the marketplace.

To conclude, digitalization has fundamentally transformed the way companies operate, making a significant impact on their performance. Through the integration of digital tools like BI

systems, ERP platforms, BD analytics, and automation technologies, organizations can improve decision-making, enhance efficiency, foster innovation, and gain a competitive advantage. These digital tools enable businesses to leverage real-time data, improve collaboration and transparency, and optimize their strategic decision-making processes. As companies continue to embrace digitalization, the ability to harness the power of data-driven practices will be fundamental to retaining competitiveness and achieving long-term success in an increasingly dynamic business environment.

Conclusion

To sum up, this systematic literature review highlights the profound transformations brought about by digitalization in MC systems, as analyzed using Rom and Rohde's (2006) framework. The results illustrate the significant impact of digitalization on the evolution of MC, it has become a transformative force that markedly improves corporate performance across all dimensions. The integration of advanced technologies, like BI, ERP platforms, and automation tools, has revolutionized MC, decision-making, and operational efficiency. Through providing real-time data, improving collaboration, and fostering innovation, digitalization enables organizations to make more informed and timely decisions, optimize resources, and remain competitive in a fast-evolving business environment. Furthermore, the automation of processes and the integration of BD analytics empower companies to streamline operations, enhance transparency, and strengthen governance. As organizations continue to embrace these digital tools, their ability to harness the power of data-driven practices will be crucial for sustaining growth, enhancing adaptability, and achieving long-term success. However, these developments raise challenges in terms of adapting to new technologies, resistance to change and developing employee skills. The integration of digital devices helps to increase transparency and operational efficiency, but it requires strategic coherence to improve performance. In addition, despite the many benefits offered by digitalization, such as improved decision-making capabilities, operational efficiency, and strategic alignment, serval limitations remain. The findings reveal that technology adoption can be uneven within organizations, with challenges related to employee resistance, skills gaps, and the risks associated with over-reliance on digital tools.

Future research should address these limitations by exploring longitudinal impacts, sector-specific applications, and the interaction between digital technologies and organizational culture. In addition, the review highlights the need for further investigation into how emerging technologies such as artificial intelligence, blockchain, and IoT are transforming MC practices.

From a practical perspective, the study illustrates the need for organizations to invest in robust training programs, change management initiatives, and digital strategies to fully exploit the potential of digitalization. Policy-makers and practitioners must consider the ethical and social dimensions of these transformations, ensuring that digital innovations promote inclusivity and sustainability in management practices.

ANNEXE N°1

Table N°3 : Articles included in the literature review

Author(s)	Year	Source	Context	Methodology	MC Instruments	MC Tasks	MC Organization	Behavioral aspects of MC	Performance
Granlund, M.	2011	*International Journal of Accounting Information Systems*	-	Conceptual	*				
Bergmann, R.	2012	*Public Money & Management*	Switzerland	Qualitative	*	*			
McAfee, A., et al.	2012	*Harverd Business Review*	-	Conceptual	*			*	
Scott, S., & Orlikowski, W.	2012	*Accounting, Organizations and Society*	-	Conceptual		*			
Wieder, B., Ossimitz, M., & Chamoni, P.	2012	*International Journal of Economic Sciences and Applied Research*	-	Conceptual	*				
Candiotto, R., & Gandini, S.	2013	*Organizational Change and Information Systems*	Unspecified	Qualitative	*	*			*
Candiotto, R., & Gandini, S.	2013	*Accounting Information Systems for Decision Making*	Germany	Quantitative	*	*			
Gullkvist, B.	2013	*International Journal of Economic Sciences and Applied Research*	Finland	Quantitative	*				
Guenther, T. W.	2013	*Journal of Management Control*	-	Conceptual	*			*	

Al-Zubi, Z., Shaban, O. S., & Alnaser, N.	2014	*International Review of Management and Business Research*	Unspecified	Quantitative	*				
Bhimani, A., & Willcocks, L.	2014	*Accounting and Business Research*	-	Conceptual	*	*			
Busco, C., & Quattrone, P.	2015	*Contemporary Accounting Research*	-	Conceptual	*				
Chenhall et Moers	2015	*Accounting, Organizations and Society*	-	Conceptual			*		
Liew	2015	*International Journal of Accounting Information Systems*	Unspecified	Qualitative	*	*	*		
Schneider, G. P., Dai, J., Janvrin, D. J., Ajayi, K., & Raschke, R. L.	2015	*The Accounting Review*	-	Conceptual		*			
Henttu-Aho, T.	2016	*Qualitative Research in Accounting & Management*	Germany	Qualitative	*			*	
Quattrone, P.	2016	*Management Accounting Research*	-	Conceptual		*			
Agostino, D., & Sidorova, Y.	2017	*Accounting, Auditing & Accountability Journal*	Italy	Qualitative					*

Al-Htaybat, K., & von Alberti-Alhtaybat, L.	2017	*Accounting, Auditing & Accountability Journal*	Unspecified	Qualitative	*	*		*	
Arnaboldi, M., Busco, C., & Cuganesan, S.	2017	*Accounting, Auditing & Accountability Journal*	-	Conceptual					*
Ax, C., & Greve, J.	2017	*Management Accounting Research*	Swiden	Quantitative	*				
Bellucci, M., & Manetti, G.	2017	*Accounting, Auditing & Accountability Journal*	USA	Quantitative	*				
Bredmar, K.	2017	*International journal of the Society for Advancing Innovation and Research in Economy*	Unspecified	Qualitative					*
Mancini, D., Lamboglia, R., Castellano, N. G., & Corsi, K.	2017	*Reshaping Accounting and Management Control Systems*	Italy	Qualitative	*		*		
Tang, G., Yu, B., Cooke, F. L., & Chen, Y.	2017	*Personnel Review*	China	Quantitative	*				

Al-Htaybat, K., & von Alberti-Alhtaybat, L.	2018	*Accounting Education*	Unspecified	Qualitative	*				
Cavelius, A., et al.	2018	*HAL science ouverte*	France	Qualitative		*			
Isaksson, A. J., Harjunkoski, I., & Sand, G.	2018	*Computers & Chemical Engineering*	-	Conceptual	*	*		*	
Nespeca, F., & Chiucchi, M. S.	2018	*Network, Smart and Open*	-	Conceptual	*	*			*
Daskalova, M., & Ivanova, D.	2019	*International Conference on Creative Business for Smart and Sustainable Growth (CREBUS)*	-	Conceptual	*				*
Gigova, T., Nikolova-Alexieva, V., & Valeva, K.	2019	*IOP Conference Series: Materials Science and Engineering*	Bulgaria	Quantitative					*
Pervan, I., & Dropulić, I.	2019	*Journal of Contemporary Management Issues*	Croatia	Quantitative	*	*	*		
Amzil, H., & Nefzaoui, A.	2020	*Revue Du contrôle, De La Comptabilité Et De l'audit*	Morocco	Qualitative	*	*			

Andreassen	2020	*Journal of Management Control*	Unspecified	Quantitative	*	*		*	
Bergmann, M., Brück, C., Knauer, T., & Schwering, A.	2020	*Journal of Management Control*	Germany	Quantitative	*	*			
Bhimani, A.	2020	*Journal of Management Control*	-	Conceptual		*			
Boutgayout, M., & El Ghazali, D.	2020	*The International Journal of Digital Economy*	-	Conceptual		*			*
EL GHAZALI , M. ., & BOUTGAYOUT, B. .	2020	*Revue Du contrôle, De La Comptabilité Et De l'audit*	-	Conceptual		*			
Cavélius, F., Endenich, C., & Zicari, A.	2020	*Comptabilité Contrôle Audit*	France	Quantitative		*			
Keimer, C., & Egle, G.	2020	*Die Digitalisierung der Controlling-Funktion*	-	Conceptual		*			*
Kutsyk et al.	2020	*Baltic Journal of Economic Studies*	-	Conceptual			*		
Lazarevna, P. A., Nikolaevna, K. S.,	2020	*Proceedings of the III International Scientific and Practical Conference*	Russia	Quantitative	*				*

Alekseevna, V. V., & Konstantinovich, Y. E.									
Möller, K., Schäffer, U., & Verbeeten, F.	2020	*Journal of Management Control*	-	Conceptual	*	*	*	*	*
Rumyantseva, I. A., Krotenko, T. Y., & Zhernakova, M. B.	2020	*Industry Competitiveness: Digitalization, Management, and Integration*	-	Conceptual	*			*	
Ciampi, F.	2021	*Association Francophone de Comptabilité*	France	Qualitative		*			
Corsi, K., & Arru, B.	2021	*Accounting, Auditing & Accountability Journal*	Italy	Qualitative	*				
Güler, N.	2021	*Association Francophone de Comptabilité*	Unspecified	Qualitative		*			
Korhonen, T., Selos, E., Laine, T., & Suomala, P.	2021	*Accounting, Auditing & Accountability Journal*	Unspecified	Qualitative		*			

Korhonen, T., Selos, E., Laine, T., & Suomala, P.	2021	*Digital Transformation of the Financial Industry*	-		*	*			
Manser Payne, E. H., Dahl, A. J., & Peltier, J.	2021	*Journal of Research in Interactive Marketing*	-	Conceptual	*	*			*
Platov, A., Kalemulloev, M., & Zikirova, S.	2021	*III International Scientific and Practical Conference "Modern Management Trends and the Digital Economy: from Regional Development to Global Economic Growth"*	-	Conceptual		*	*		
Reutter, J., Allain, E., & Landagaray, P.	2021	*Audit Comptabilité Contrôle : Recherches Appliquées*	-	Qualitative		*			
Sardini, D.	2021	*tesi.univpm.it*	-	Qualitative	*				
Spraakman, G., Sanchez-Rodriguez, C., & Tuck-Riggs, C. A.	2021	*Qualitative Research in Accounting & Management*	Canada	Qualitative	*	*			

Troshani and Rowbottom	2021	*Australian Accounting Review*	-	Conceptual	*				
Troshani, I., & Rowbottom, N.	2021	*Australian Accounting Review*	-	Conceptual		*	*		*
Ulrich, P., & Güler, H.	2021	*Corporate Ownership & Control*	Unspecified	Quantitative	*	*			
Youssef et Mahama	2021	*Journal of Accounting & Organizational Change*	UAE	Quantitative	*				*
Arnaboldi, M., de Bruijn, H., Steccolini, I., & Van der Voort, H.	2022	*Qualitative Research in Accounting & Management*	Unspecified	Qualitative	*			*	
Dony, S., & Maurel, C.	2022	*Gestion et management public*	Unspecified	Qualitative					*
Hasibuan, T. F. H., Meifari, V., & Muda, I.	2022	*Journal of Pharmaceutical Negative Results*	-	Conceptual	*	*		*	
Szukits, Á.	2022	*Journal of Management Control*	Unspecified	Quantitative		*	*		
Thelen, P. D.	2022	*International Journal of Strategic Communication*	Unspecified	Quantitative	*				

Zhyvko, Z., Nikolashyn, A., Semenets, I., Karpenko, Y., Zos-Kior, M., Hnatenko, I., ... & Krakhmalova, N.	2022	*Journal of Hygienic Engineering & Design*	Ukraine	Quantitative		*			
Barrachina-Palanca, M., Gonzalez-Sanchez, M. B., & Gutiérrez-López, C.	2023	*Higher Education Quarterly*	Spain	Quantitative		*			
Elhamma and El-Moumane	2023	*International Journal of Management, Accounting and Economics*	Morocco	Quantitative	*	*		*	
GRIGUER, S., & LAKHOUIL, A.	2023	*International Journal of Financial Accountability, Economics, Management, and Auditing*	-	Conceptual		*			

Medved, I., Peštović, K., & Saković, D.	2023	*Digital Transformation of the Financial Industry*	Serbia	Quantitative					*
Papiorek, K. L., & Hiebl, M. R.	2023	*Journal of Accounting & Organizational Change*	Germany	Quantitative			*		
Syed, B. A.	2023	*Advance Social Science Archive Journal*	-	Conceptual	*		*	*	*
Broccardo, L., Vola, P., Alshibani, S. M., & Tiscini, R.	2024	*Journal of Intellectual Capital*	Italy	Qualitative	*	*		*	
Alsughayer, S.	2024	*Journal of Accounting & Organizational Change*	KSA	Qualitative	*	*		*	*
EL MODNI, H., & Mounime, F.	2024	*Alternatives Managériales Economiques*	-	Conceptual	*				*
Fähndrich, K.	2024	*Journal of Accounting & Organizational Change*	Germany	Quantitative	*			*	
Fähndrich, K.	2024	*Qualitative Research in Accounting & Management*	Germany, Austria and Switzerland.	Qualitative	*			*	

Papiorek, K. L., & Hiebl, M. R.	2024	*Journal of Accounting & Organizational Change*	Germany	Quantitative		*	*		*
Thaller, J., Duller, C., Feldbauer-Durstmüller, B., & Gärtner, B.	2024	*Journal of Applied Accounting Research*	Germany	Quantitative		*			
Sundström, A.	2024	*Critical Perspectives on Accounting*	-	Conceptual		*			
Zaman, S. A. A., Vilkas, M., Zaman, S. I., & Jamil, S.	2024	*Journal of Manufacturing Technology Management.*	Lithuany	Quantitative	*				*

Source : Authors

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